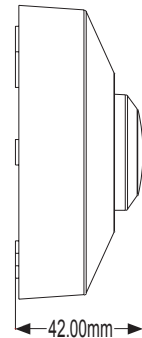
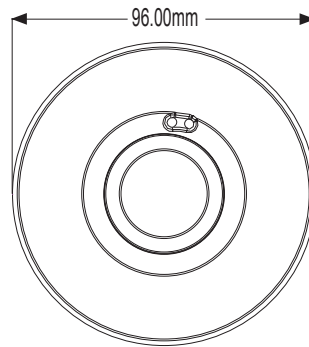


# PD-MV1012-Z Microwave Sensor Instruction



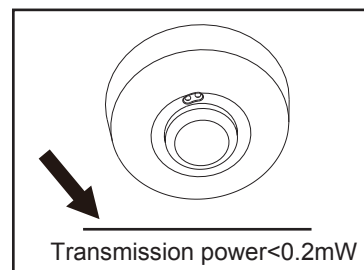
## Summary

The microwave sensor is according to the microwave doppler effect <the basic principle of radar> , it can be widely used in as automatic control switch, the security system, and automatic video control system of ATM, as well as other automatic induction control area. The detection way has the below advantages compared with other as follows: 1. Non-contact detection, 2. Suitable for bad environment, immune to temperature, humidity, noise, air, dust, light...3.RF interference ability, 4.Transmission power only 0.2 mW, It will not harm the human body. Simple installation+ easy wiring. We use appropriate micro processing integrator, not only for high sensitivity and wide range of detection, and on very reliable work, error rate is extremely low, It can stable working on the temperature range: - 15 ~ + 70 Celsius degrees.

It uses the MCU to accurately calculate the switch information, and accurately controls the relay to be turned on at the zero point of the sine wave, so that each load is turned on. At the zero point of the sine wave, the inrush current problem caused by the conventional control mode when the sine wave high voltage is turned on is avoided, especially the large current damage relay generated by the large-capacity capacitor under the impact of the high voltage under the load. Due to the diversification of current electrical loads, especially LED lamps, energy-saving lamps, and fluorescent lamps all have capacitors with different capacitances. This is a disaster for relays. Sometimes a 50W LED lamp can generate surge currents of 80 to 120A. The 10A ordinary relay can only withstand 3 times of the inrush current, and it is likely that the relay will be broken in a few days or several times. This is why the conventional sensor on the market has a short life and a small load current.

In order to overcome this problem, this product adopts advanced digital precision calculation to turn on the load when the sine wave is at zero potential, thus solving the load surge current problem, greatly enhancing the load capacity and prolonging the service life of the product. The latest control method of mass production sensor technology can easily control any load. It is a medium and high-end product. Although the cost is increased compared with the conventional version, the reliability and life of the product are greatly increased. This product is equal to choosing peace of mind, and choosing safety.

**NOTE:** the high-frequency output of this sensor is <0.2mW- that is just one 5000<sup>th</sup> of the transmission power of a mobile phone or the output of a microwave oven.

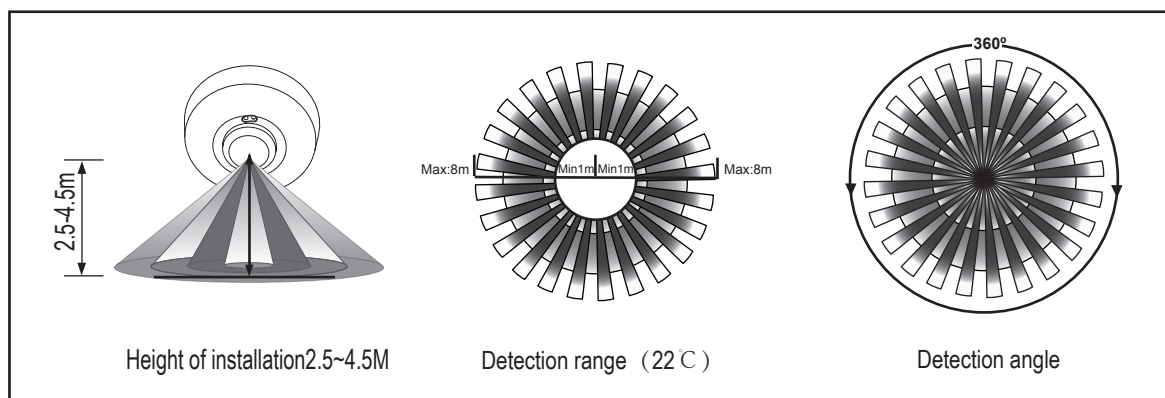


## Specifications

Power source: 220-240VAC 50/60Hz  
Transmission power: <0.2mW  
Rated load:1200W. any load  
Installation sit: indoors, ceiling mounting  
Detection angle: 360°

Detection range ( 22 C ) : 1-8m(radii.) (adjustable)  
Time setting: 8sec to 12min (adjustable)  
Light-control: 2~2000LUX (adjustable)  
Working temperature: -15°C~+70°C  
HF system: 5.8GHz CW Electric wave,ISM band

## Sensor Information



## Installation



### Warning!

1. Please keep it away from the children.
2. Please avoid fire/high temperature/damp places for installation.
3. Please confirm when shut off the power cord access.

1. Take down the top cover by turning it anti-clockwise(see fig.1), and then tighten off the two screws fixing middle cover(see fig.2);
2. Hold base against the Ceiling and mark drill holes(see fig.3),paying attention to any existing wiring in the Ceiling;
3. Drill the holes, insert wall plugs (6mm dia.)(see fig.4);

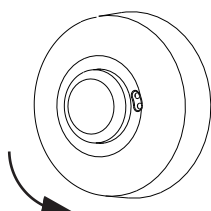


fig.1

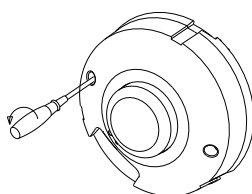


fig.2

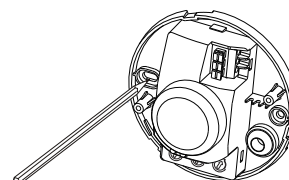


fig.3

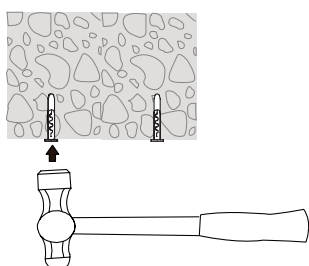
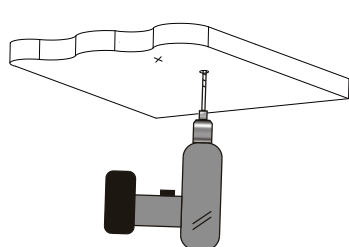


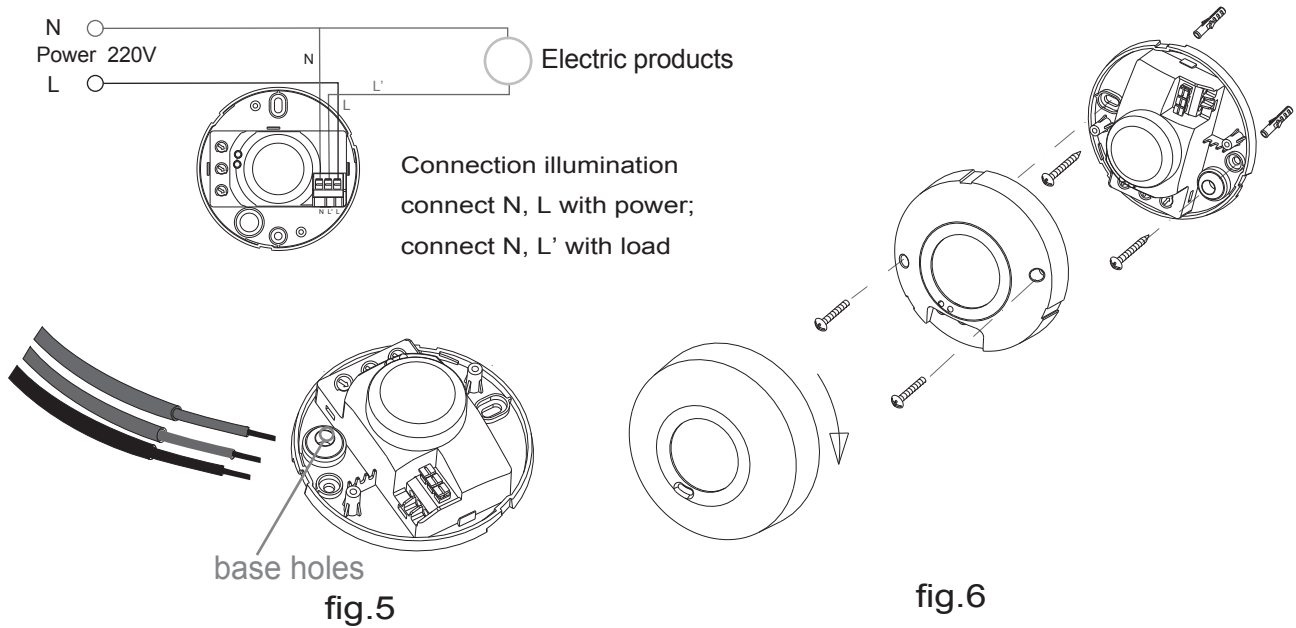
fig.4



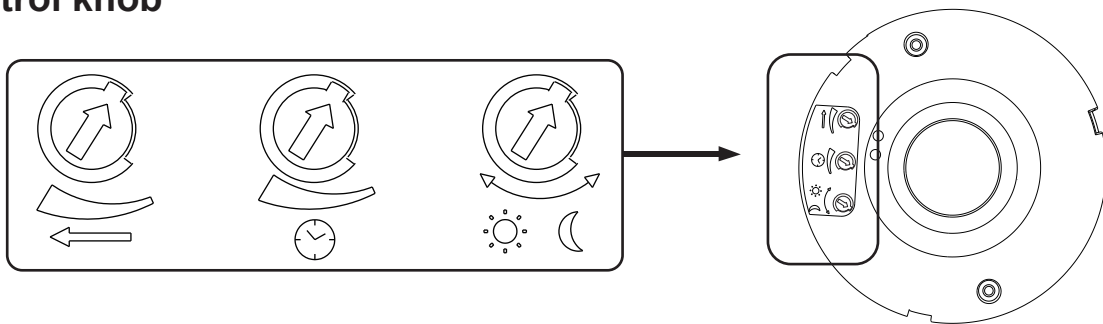
### Warning!

When you are drilling ,please make sure you wear glasses and dust masks to prevent the dust fly into the nose and throat causing unnecessary trouble.

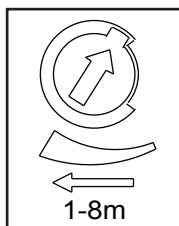
4. Put the power wire and load wire through the base holes(see fig.5);
5. Screw the base into place(see fig.6);
6. Connect the mains power supply and the load wire to the connection terminal according to connection-wire mark.
7. Close the middle cover(see fig.6) and adjust knob to setting;
8. Fit glass shade and turn it clockwise(see fig.6).



## Control knob



## Detection range setting (sensitivity)



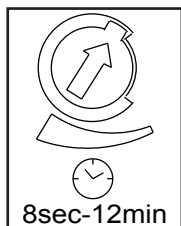
Detection range is the term used to describe the radii of the more or less circular detection zone produced on the ground after mounting the sensor light at a height of 2.5m, turn the Detection control fully anticlockwise to select minimum detection range (approx. 1m radii), and fully clockwise to select maximum detection range (approx. 8m radii).

**NOTE:** the above detection range is gained in the case of a person who is between 1.6m~1.7m tall with middle figure and moves at a speed of 1.0~1.5m/sec. if person's stature, figure and moving speed change, the detection range will also change.

**ATTENTION:**When use this product, please adjust the sensitivity to an appropriate position you need, please do not adjust the sensitivity to maximum, to avoid the product does not work normally caused by wrong motion. Because the sensitivity is too high easily detect the wrong motion by wind blowing leaves & curtains, small animals, and the wrong motion by interference of power grid & electrical equipment. All those lead the product does not work normally !

When the product does not work normally, please try to lower the sensitivity appropriately, and then test it.

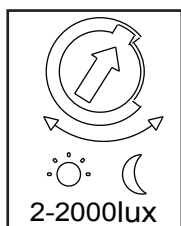
## Time setting



The light can be set to stay ON for any period of time between approx. 8sec (turn fully anticlockwise) and a maximum of 12min (turn fully clockwise). Any movement detected before this time elapse will re-start the timer. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test.

**NOTE: after the light switches OFF, it takes approx. 1sec before it is able to start detecting movement again. The light will only switch on in response to movement once this period has elapsed.**

## Light-control setting



The chosen light response threshold can be infinitely from approx. 2-2000lux. Turn it fully anti-clockwise to select dusk- to-dawn operation at about 2 lux. Turn it fully clockwise to select daylight operation at about 2000lux. The knob must be turned fully clockwise when adjusting the detection zone and performing the walk test in daylight.

**Note: please don't adjust the three functional buttons to excess. That is because the three functional buttons were connected to the components directly, there is a small stopper in each of the three components, when you adjust the buttons from start to end, the excessive turn will damage the stopper, and lead to the 360°non-stop turn around. The adjust range limit is 270°, please do pay attention to this.**

## Troubleshooting

| Malfunction                                     | Cause   | Remedy                     |
|---|---|----------------------------|
| The load will not work                          | • wrong light-control setting selected  | • Adjust setting           |
|   | • load faulty   | • Change load              |
|   | • mains switch OFF  | • Switch ON                |
| The load work always                            | • continuous movement in the detection zone   | • Check zone setting       |
| The load work without any identifiable movement | • the sensor not mounted for detecting movement reliably  | • Securely mount enclosure |
|   | • movement occurred, but not identified by the sensor(movement behind wall, movement of a small object in immediate lamp vicinity etc.) | • Check zone setting       |
| The load will not work despite movement         | • rapid movements are being suppressed to minimize malfunctioning or the detection zone you have set is too small                       | • Check zone setting       |

## **Warning!**

Please confirm with profession installation.

Please cut off power supply before installation and removal operations.

Make sure that you have cut off the power for safety purposes.

Improper operation caused losses, the manufacturer does not undertake any responsibility.